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78

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,598	09/26/2003	Ulrich R. Bernier	0148.01	9892
25295	7590	03/30/2006	EXAMINER	
USDA, ARS, OTT				CHOI, FRANK I
5601 SUNNYSIDE AVE				
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				PAPER NUMBER
				1616

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/670,598	BERNIER ET AL.	
	Examiner Frank I. Choi	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 and 43-55 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1 and 43-55 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. ____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>9/26/2003</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: ____.

DETAILED ACTION

Specification

A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference

Art Unit: 1616

required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required.

Applicant is still required to submit the reference in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

Applicant in the ADS cites to the 09/304,362 but not 09/848,236 and in the first sentence cites to 09/848,236 but not to 09/304,362. To avoid confusion, Examiner request that Applicant provide both an amended ADS citing to both Applications and an amendment to the Specification citing both applications and their relationship to each other and/or the present application and also indicating that said applications are now US Pat. Nos. 6,267,953 and 6,800,279 where applicable.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2 of U.S. Patent No. 6,267,953. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the application and patent claims compositions and methods for attracting mosquitoes, which are arthropods, containing lactic acid and acetone and/or dimethyl disulfide.

Although this application is a divisional of said patent which was subject to a restriction requirement, i.e. an election of species requirement, a double patenting rejection is proper as Applicant has not made a clear demarcation between the elected invention of the parent application and the claimed invention of the present divisional application in that the Applicant is also claiming the elected invention of said parent application in the present divisional application (See *Gerber Garment Technology, Inc. v. Lectra Systems, Inc.*, 16 USPQ2d 1436 (Fed. Cir. 1990)).

Claims 1, 48, 50 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 6,800,279. Although the conflicting claims are not identical, they are not patentably distinct from each other because

claims 1-12 contain combinations of attractants which fall within the scope of claim 1. The method of claim 11 of said patent discloses a compositions consisting of glycolic acid and acetone. The composition of claim 2 of said patent discloses mosquito attracting amounts of lactic acid and butanone. As such, it would be obvious to modify the composition claim into a method of attracting mosquitoes with said claim.

Claim Objections

Claim 1 objected to because of the following informalities: Claim 1, line 2, “formula 1” should be “formula I”. Claim 1, line 38, “formula I”, should be “formula I”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 43, 44 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the specific embodiments, i.e. those compounds or mixtures of compounds which were tested and found to be effective in attracting *Aedes aegypti*, *Aedes albopictus* and *Anopheles albimanus* does not reasonably provide enablement for the all compounds or mixtures of compounds with respect all arthropods, or even all mosquitos. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make/and or use the invention commensurate in scope with these

claims. For instance, lactic acid is known to be a repellent to tsetse flies (See Voskamp et al., Abstract; Mihok et al., Abstract; Saini et al., Abstract). Further, different species of mosquitos are effected differently, i.e. - attracted, repelled or non-responsive, by various compounds, including compounds falling within the scope of Applicant's invention (See Takken et al. (1999), pgs 140-45; Schreck et al. (1990), pg. 409, Table 2; Kline et al. (1990), pg. 386-90). Furthermore, even with respect to *Aedes aegypti*, altering the base structure of lactic acid has varying effects of the attractancy and/or repellancy of the lactic acid derivative to *Ae. aegypti* (See Carlson et al. (1973), pgs 329-331; Davis (1988), pg. 445, Table 1). As such, in light of the above, it appears that a skilled artisan would be required to do undue experimentation in order to make and/or use the invention commensurate in scope with the claims.

Claim Rejections - 35 USC § 102/103

Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by Granata et al. or Laye et al..

Granata et al. expressly disclose a product comprising lactic acid, acetone, 2-butanone, 2,3-pentanedione, 2-heptanone, 3-hydroxy-2-butanone, diacetyl, acetaldehyde, ethanol, hexanol, trichloromethane, 2-ethyl furan, benzene and dimethyl disulfide falling within the scope of applicant's claims (Pg. 333-34, Lactic acid production, Pg. 335, Table 8, Volatile compound composition).

Laye et al. expressly disclose a product comprising lactic acid, pyruvic acid, acetone, 2-butanone, diacetyl, 2,3-pentanedione, 2-heptanone, 2-hydroxy-2-butanone, 2-nonenone, acetaldehyde, 2-propanol, ethanol, methyl benzene, dimethyl sulfide, dimethyl disulfide and benzothiazole falling within the scope of applicant's claims (Pg. 992-94, Lactose and organic acids, Volatile compounds, Tables 5-8).

Claims 1, 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Carlson et al. (Yellowfever Mosquitoes:Compounds Related to Lactic Acid that Attract Females).

Carlson et al. expressly discloses a method and composition for attracting mosquitoes containing glycolic acid and acetone (Pg. 330, Table 1).

Claims 1,43,44,50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (Annals of the Entomological Society of America 1970) in view of Kline et al. (J. am. Mosq. Control Assoc. 1998) and Wilson et al. (US Pat. 4,818,526).

Smith et al. teaches that the combination of lactic acid and carbon dioxide is an effective mosquito attractant (Pg. 766).

Kline et al. teach that that the combination of butanone and carbon dioxide is effective in attracting mosquitoes (Abstract).

Wilson et al. teaches that dimethyl disulfide is effective in attracting mosquitoes (Column 8, lines 44-60).

The difference between the prior art and the claimed invention is that the prior art does not expressly disclose compositions or methods comprising or comprising essentially of lactic acid and butanone or lactic acid, butanone and dimethyl disulfide. However, the prior art amply suggests the same as lactic acid, butanone and carbon dioxide and dimethyl disulfide are known to attract mosquitoes. As such, it would have been well within the skill of and one of ordinary skill in the art would have been motivated to modify the prior art as above with the expectation that the combination would be effective in attracting mosquitoes. See *In re Kerkhoven*, 205 USPQ 1069, 1072 (CCPA 1980); *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992).

Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

Claims 1,45,52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (Annals of the Entomological Society of America 1970) in view of Paganessi et al. (US Pat. 5,943,815).

Smith et al. teaches that the combination of lactic acid and carbon dioxide is an effective mosquito attractant (Pg. 766).

Paganessi et al. (US Pat. 5,943,815) teach that the combination of acetone with carbon dioxide is an effective attractant for mosquitoes (Column 2, lines 53-68, Column 3, lines 1-25).

The difference between the prior art and the claimed invention is that the prior art does not expressly disclose compositions and methods of attracting mosquitoes consisting of lactic acid, acetone and carbon dioxide. However, the prior art amply suggests the same as it is known in the art that the combination of lactic acid or acetone, each with carbon dioxide is effective in attracting mosquitos. As such it would have been well within the skill of and one ordinary skill in the art would have been motivated to combine lactic acid, acetone and carbon dioxide with the expectation that the same would be effective in attracting mosquitoes.

Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

Claims 1,46, 47,53,54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (Annals of the Entomological Society of America 1970) in view of Wilson et al. (US Pat. 4,818,516).

Smith et al. teaches that lactic acid and that the combination of lactic acid and carbon dioxide is an effective mosquito attractant (Pg. 766).

Wilson et al. teaches that dimethyl disulfide is effective in attracting mosquitoes (Column 8, lines 44-60).

The difference between the prior art and the claimed invention is that the prior art does not expressly disclose compositions or methods for attracting mosquitoes consisting of lactic acid and dimethyl disulfide or lactic acid, dimethyl disulfide and carbon dioxide. However, the prior art amply suggests the same as lactic acid , lactic acid and carbon dioxide and dimethyl disulfide are known to be attractants for mosquitoes. As such, it would have been well within the skill of and one of ordinary skill in the art would have been motivated to modify the prior art as above with the expectation that the combination lactic acid and dimethyl disulfide and the combination of lactic acid, dimethyl disulfide and carbon dioxides would be effective in attracting mosquitoes. See In re Kerkhoven, 205 USPQ 1069, 1072 (CCPA 1980); Ex parte Quadranti, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992).

Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

Claims 1,49,55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (Annals of the Entomological Society of America 1970) in view of Carlson et al. (Yellowfever Mosquitoes:Compounds Related to Lactic Acid that Attract Females).

Smith et al. teaches that lactic acid and that the combination of lactic acid and carbon dioxide is an effective mosquito attractant (Pg. 766).

Carlson et al. teaches that lactic acid is an effective mosquito attractant and that glycolic acid in combination with carbon dioxide is an effective mosquito attractant (Pg. 330, Table 1, pg. 331).

The difference between the prior art and the claimed invention is that the prior art does not expressly disclose compositions and methods consisting of glycolic acid, carbon dioxide and lactic acid.. However, the prior art amply suggests the same as lactic acid and carbon dioxide, and glycolic acid and carbon dioxide are known in the art to attract mosquitoes. As such, it would have been well within the skill of and one of ordinary skill in the art would have been motivated to modify the prior art as above with the expectation that the combination of glycolic acid, carbon dioxide and lactic acid would be effective in attracting mosquitoes. See *In re Kerkhoven*, 205 USPQ 1069, 1072 (CCPA 1980); *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992).

Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

Claims 1,43,44,50,51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (Annals of the Entomological Society of America 1970) in view of Kline et al. (J. am. Mosq. Control Assoc. 1998) and Wilson et al. (US Pat. 4,818,526).

Smith et al. teaches that the combination of lactic acid and carbon dioxide is an effective mosquito attractant (Pg. 766).

Kline et al. teach that that the combination of butanone and carbon dioxide is effective in attracting mosquitoes (Abstract).

Wilson et al. teaches that dimethyl disulfide is effective in attracting mosquitoes (Column 8, lines 44-60).

The difference between the prior art and the claimed invention is that the prior art does not expressly disclose compositions or methods comprising or comprising essentially of lactic acid and butanone or lactic acid, butanone and dimethyl disulfide. However, the prior art amply suggests the same as lactic acid, butanone and carbon dioxide and dimethyl disulfide are known to attract mosquitoes. As such, it would have been well within the skill of and one of ordinary skill in the art would have been motivated to modify the prior art as above with the expectation that the combination would be effective in attracting mosquitoes. See *In re Kerkhoven*, 205 USPQ 1069, 1072 (CCPA 1980); *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992).

Therefore, the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention has been collectively taught by the combined teachings of the references.

Conclusion

10/670,598

Application/Control Number: [REDACTED]

Page 12

Art Unit: 1616

A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier number for accessing the facsimile machine is 571-273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Choi whose telephone number is (571)272-0610. Examiner maintains a flexible schedule. However, Examiner may generally be reached Monday-Friday, 8:00 am – 5:30 pm (EST), except the first Friday of the each biweek which is Examiner's normally scheduled day off.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Gary Kunz, can be reached at 571-272-0887. Additionally, Technology Center 1600's Receptionist and Customer Service can be reached at (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FIC

March 17, 2006



JOHN PAK
PRIMARY EXAMINER
GROUP 1620